TECHNICAL REVIEW DOCUMENT for OPERATING PERMIT 950PWE038

to be issued to:

Duke Energy Field Services, Inc Greeley Gas Processing Plant Weld County Source ID 1230099

Prepared by Michael E. Jensen March 3, 1999

I. PURPOSE:

This document establishes the basis for decisions made regarding the Applicable Requirements, Emission Factors, Monitoring Plan and Compliance Status of Emission Units covered within the Operating Permit proposed for this site. It is designed for reference during review of the proposed permit by the EPA and during Public Comment. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Conclusions in this document are based on information provided in the original application submittal of December 8, 1995, the supplemental technical submittals received March 3, April 16, and October 31, 1997, and the supplemental technical information needed for the preparation of the construction permit, as well as numerous telephone contacts with the applicant.

On April 16, 1998, the Colorado Air Quality Control Commission directed the Division to implement new procedures regarding the use of short term emission and production/throughput limits on Construction Permits. These procedures are being directly implemented in all Operating Permits that had not started their Public Comment period as of April 16, 1998. All short term emission and production/throughput limits that appeared in the Construction Permits associated with this facility that are not required by a specific State or Federal standard or by the above referenced Division procedures have been deleted and all annual emission and production/throughput limits converted to a rolling twelve (12) month total. Note that, if applicable, appropriate modeling to demonstrate compliance with the National Ambient Air Quality Standards was conducted as part of the Construction Permit processing procedures. If required by this permit, portable monitoring results and/or EPA reference test method results will be multiplied by 8760 hours for comparison to annual emission limits unless there is a specific condition in the permit restricting the hours of operation.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such

revisions, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised Construction Permit.

II. Source Description:

This plant is classified as a natural gas processing plant as set forth in Standard Industrial Classification 1321. The Greeley Gas Processing Plant consists of two operations, a gas processing skid and a fractionation assembly. The gas processing skid utilizes straight refrigeration coupled with the Joule-Thompson process to create a natural gas liquid (NGL) product and a residue gas stream. The residue gas is recompressed and routed to the sales pipeline. The NGL product is sent to the fractionation assembly. Fugitive volatile organic compounds (VOC) emissions from the natural gas processing skid are subject to the provisions of 40 CFR Part 60 Subpart KKK, Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants.

The fractionation assembly separates the NGL product into ethane, propane, butane, isopentane and natural gasoline streams. Each of these streams is stored in pressurized bullet tanks prior to transport off-site by truck. A triethylene glycol (TEG) system operates to dehydrate the ethane gas created by the fractionation process. Fugitive VOC emissions from the fractionation towers and associated piping are subject to the provisions of 40 CFR Part 60 Subpart KKK.

The entire plant operation requires the use of ten (10) natural gas-fired internal combustion engines powering compressors, two natural gas-fired heaters to heat an oil heating medium, a natural gas liquids truck loadout rack, a truck loadout rack for stored condensate, and a number of storage tanks of various sizes containing a variety of materials.

The plant is located in Weld County at the south edge of Greeley, Colorado. The area in which the plant operates is designated as attainment for all criteria pollutants. Wyoming is an affected state within 50 miles of the plant. Rocky Mountain National Park is a Federal Class I designated areas within 100 kilometers of the plant.

The Title V application reported the gas plant was not subject to the Accidental Release Prevention Plan provisions of Section 112(r)(7) of the Federal Clean Air Act. EPA has developed a more detailed definition of natural hydrocarbons, and Duke's position is that the new definition makes the gas plant subject to the Prevention Plan requirements.

Construction Permit 97WE0363 set the Potential To Emit (PTE) for the entire plant as follows:

Pollutant	Potential to Emit (tpy)	Actuals (tpy)
NOx	239.0	239.9
VOC	106.8	126.2
CO	231.0	231.4
HAPs		8.81

The potential emissions are limited by the conditions in Construction Permit 97WE0363 to a level that classify this source as synthetic minor with respect to Prevention of Significant Deterioration (PSD) requirements. The estimated actual emissions are from the Division database for calendar year 1997.

At the time the Title V application was submitted the permittee submitted APENs and construction permit applications for all the sources at the plant. The documents were submitted to update, revise, or correct existing construction permits as necessary, or request a new construction permit. Further, the permittee requested a single permit be issued for the entire plant, rather than for each individual source.

The new Construction Permit also required the submittal of a compliance plan for all the sources. The Division accepts the monitoring proposal provided in the Title V application as the submittal of the compliance plan required by the Construction Permit. In the discussion in the following sections, the Division considers the Responsible Official certification submitted with the semi-annual report will serve as the self-certification for Construction Permit 97WE0363. The appropriate provisions of the Construction Permit have been directly incorporated into this operating permit.

The Division accepts the responsible official signature of the Title V application as evidence of compliance for all the sources at the plant at the time the Title V application was submitted.

After the Title V application had been submitted the permittee requested a modification of the alternative operating scenario. The permittee wanted less restrictions on the requirements whenever an engine was replaced. An extended dialogue between the Division and the permittee developed standard language to be used.

The magnitude and the nature of the discrepancies between the existing construction permits and the information submitted with the Title V application would have precluded the Division from accepting the facility was in compliance at the time the operating permit application was submitted. A Compliance Order on Consent, last signed on January 8, 1999, included provisions that Duke obtain a construction permit for a stabilization tower subject to the provisions of 40 CFR Part 60, Subpart KKK, properly meet LDAR reporting requirements and demonstrate that the vapor recovery unit for the Y-grade truck loadout/blowdown satisfied the Reasonably Available Control Technology

(RACT) requirement of Regulation No. 7. The Division accepts the signing of the Order as evidence the facility is currently in compliance.

III. EMISSION SOURCES:

The following sources are specifically regulated under terms and conditions of the Operating Permit for this plant:

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Internal Combustion Engines Powering Compressors
P120 - Waukesha F-3521 GSI 450 HP w/ NSCR
P121 - Waukesha F-1197 GU 125 HP w/ NSCR
P122 - Waukesha L-7042 GSI 1100 HP w/ NSCR
P123 - Waukesha L-7042 GSI 1100 HP w/ NSCR
P124 - Waukesha L-7042 GSI 1100 HP w/ NSCR
P125 - Waukesha L-7042 GSI 1100 HP w/ NSCR
P126 - Waukesha L-7042 GSI 1100 HP w/ NSCR
P127 - Waukesha L-7042 GSI 1100 HP w/ NSCR
P128 - Waukesha L-7042 GSI 1100 HP w/ NSCR
P129 - Waukesha L-7042 GSI 1100 HP w/ NSCR
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1. Applicable Requirements: Construction Permit 97WE0363 was issued after the Title V permit application was submitted and is being directly incorporated into this operating permit. The Construction Permit set pollutant limits for the total plant, commonly known as 'bubble limits', as well as limits for individual pieces of equipment.

The engines are required to demonstrate compliance by stack tests to be conducted within 180 calendar days of the issuance of the operating permit if they have not already been completed.

Form 2000-604, Item 10, of the Title V application states that emissions of natural gas from compressor engine blowdown during maintenance and during engine start-up qualifies as an insignificant source. The statement continues that emission limits do not apply during the first ½ hour of operation after a cold start. The Division agrees that if calculations to estimate the emissions released are below the APEN threshold when the maintenance blowdown and engine startup are limited to ½ hour, this activity may be considered an insignificant activity. Records will have to be maintained to demonstrate that these activities are performed in less than ½ hour. The permittee could not cite a regulatory basis for the startup statement. The Division does not accept that there is such a provision.

2. Emission Factors: Emissions from reciprocating engines are produced during the combustion process, and are dependent upon the fuel mixture, engine design specifications, and specific

properties of the natural gas being burned. The pollutants of concern are Nitrogen Oxides (NOx), Carbon Monoxide (CO) and Volatile Organic Compounds (VOC). Small quantities of Hazardous Air Pollutants (HAPs) are also emitted when combustion is incomplete. Approval of emission factors for use with engines is necessary to the extent that accurate actual emissions are required to verify the need to submit Revised APENs to update the Division emission inventory, and for compliance determination and certification. Construction permit 97WE0363 required compliance testing to be performed on the engines to validate the proposed emission factors. At the time of the preparation of this operating permit the compliance testing had not been completed.

3. Monitoring Plan: The operating permit established a procedure for the calculation of the emissions based on fuel consumption and a fuel based emission factor. The emissions are to be calculated monthly to determine compliance with the annual (12-month rolling total) limit. A Revised APEN must be submitted to the Division if criteria emissions increase by more than 50 tons per year or 5%, whichever is less, compared to the latest APEN on file with the Division. A copy of a monitoring guidance grid developed by the Division is included at the end of this document. The grid and the Title V application monitoring proposals were used to define the monitoring requirements for the internal combustion engines.

The Division monitoring guidance grid requires more intensive and extensive monitoring of the emissions from internal combustion engines when the total plant emissions approach the threshold for emission increases to be subject to the requirements for Prevention of Significant Deterioration (PSD) review. The increased monitoring is needed to verify that the sources remain not subject to the PSD requirements.

The Division has determined, based on AP-42 emission factors and engineering judgement, that particulate emissions from these type of internal combustion engines will be insignificant if natural gas is exclusively used as the fuel. The use of natural gas will also satisfy the opacity monitoring requirement.

The air/fuel ratio(AFR) controllers are installed to control the fuel mixture to achieve a defined operation or performance level of the engine. The AFRs can be set to optimize the performance of the non-selective catalytic converters (NSCR) installed on the engines. It is the Division's position that the AFRs should be set and operated to ensure the engine emissions remain with the control envelope of the NSCR. A properly functioning NSCR will demonstrate a heat rise across the unit as a result of the oxidation or conversion of the air pollutants. The media deteriorates with time and needs to be replaced or regenerated. Particulate matter from the engine can be trapped in the catalytic material and lead to an increase in the pressure drop across the control device. The accidental backfire of an engine can result in the loss or destruction of the media. The monitoring plan provides reasonable evidence of the presence and functioning of the catalytic media.

The Division considered the possible relaxation of the engine quarterly portable monitoring requirements for the engines to a semi-annual frequency if compliance was demonstrated during all quarters of the first full year of monitoring. The application review found the actual estimated

annual emissions are close to the 250 tons per year thresholds for the plant to become a major source for PSD considerations. The Division finds the limited margin justifies the continuation of the more frequent monitoring of the performance of the engines and the air pollution control devices. The permittee reported they have a routine maintenance plan to service the equipment at four (4) month intervals. A calendar quarter frequency would require extra monitoring work. The problem was resolved by increasing the compliance certification to a tri-annual basis as opposed to a semi-annual basis. This will allow the permittee to synchronize the routine scheduled maintenance with the Title V monitoring.

4. Compliance Status: The equipment at this site has been operating for an extended time. A current APEN reporting criteria emissions is on file with the Division. Duke certified in the application that natural gas has been used exclusively as the fuel for this unit. As noted previously, the Division accepts the compliance signature of the responsible official as evidence of compliance.

Triethylene Glycol Regeneration Unit Ethylene Glycol Dehydration Inhibition Unit

- 1. Applicable Requirements: Construction Permit 97WE0363 established the emission and throughput limits for this unit. A future Maximum Achievable Control Technology (MACT) standard is being developed by the US Environmental Protection Agency for operations at oil and gas facilities. The MACT may contain provisions for certain glycol dehydration units. Until such time as the MACT rule is promulgated, no control requirements exist for this source.
- **2. Emission Factors:** The glycol solution is contacted with the natural gas stream to remove moisture. This mixture is heated in the still portion of the unit to drive off the water. Some volatile organic compounds and hazardous air pollutants are also released with the water vapor. Emissions from this process are typically measured with a glycol analysis (rich/lean analysis) or predicted using the Gas Research Institute's computer software model GLYCalc. The model uses input values for the glycol recirculation rate, cubic feet of gas processed, desired moisture content (dew point) for the processed gas, and the amounts of various constituents in the natural gas in an algorithm to estimate VOC and HAP emissions.

The Division accepts the use of the GLYCalc model to estimate emissions in lieu of rich/lean testing. At least once a month the parametric inputs for the GLYCalc model will be recorded. The recording of the input parameters will provide a perspective on the range of the input values over time. The perspective developed will allow consideration of whether more frequent testing is needed for a better estimation of the results. Each month the GLYCalc model will be used to estimate the emissions based on the parametric inputs and extended gas analysis.

Combustion emissions from the heaters are exhausted through a stack separate from the still vent. The heaters fall under the insignificant activity category of Colorado Regulation No. 3, Part C, Section II.E.3.k. As an insignificant activity the heater emissions do not need to be addressed directly by this Operating Permit.

3. Monitoring Plan: The monitoring requirements were established from Construction Permit 97WE0363, the Division guidance grid included at the end of this document, and the monitoring information provided in the Title V application.

Input parameters from the dehydrator for the GRI GLYCalc model will be recorded at least once per calendar month. At least once each calendar month the newest version of the GRI GLYCalc computer model will be used to estimate the monthly emissions of VOC. An extended wet gas analysis is also required to verify or adjust the computer model inputs as necessary. The permittee submitted information to demonstrate a consistent quality of the natural gas. On the basis of the information provided, the extended analysis gas testing frequency was extended to an annual basis. If the gas quality does not remain consistent, the testing frequency shall revert to a quarterly frequency. Recording the values of model input parameters monthly allows the variability in the parameters to be followed.

A Revised APEN is required if a significant increase of VOC or HAPs occur as defined in Colorado Regulation No. 3, Part A, Section II.C.2. compared to the APEN currently on file with the Division.

4. Compliance Status: The equipment at this site has been operating for an extended time. A current APEN reporting criteria emissions is on file with the Division. Duke certified in the application that natural gas has been used exclusively as the fuel for this unit. As noted previously, the Division accepts the compliance signature of the responsible official as evidence of compliance.

NGL Gas Processing Plant Fractionation Plant

1.

Applicable Requirements: The Division has made the determination that fugitive VOC emissions from equipment leaks at gas compression or processing facilities must be calculated and evaluated for the appropriate permitting requirements. Both plants are subject to the provisions of 40 CFR Part 60, Subpart KKK. As noted earlier in this document, the stabilization tower is subject to the requirements to have a construction permit and the provisions of 40 CFR Part 60, Subpart KKK, for tracking and addressing volatile organic compound (VOC) leaks.

2. Emission Factors: The fugitive leak emissions are calculated based on emission factors from EPA's Protocol for Emission Leak Estimates. These factors have changed several times in the recent past. The factors used for the Construction Permit calculations were current at the time the

construction permit was prepared. The EPA factors estimate the total organic compounds. The factors are multiplied by the number of components of each type (e.g. compressor seals, flanges, etc) and the VOC weight percentage in the gas stream as determined in the most recent gas analysis. The equipment is subject to the Subpart KKK provisions for leak detection and repair. Compliance with the Subpart KKK provisions allows a reduction of the estimated VOC emissions to reflect the effort to control and reduce the leak emissions. The permittee applied a 75 percent control factor to the estimated emissions from all the components except flanges/connectors. A 30 percent control factor was applied to the flanges/connectors.

3. Monitoring Plan: The Title V application noted this equipment is subject to the provisions of 40 CFR Part 60, Subpart KKK and the monitoring would be conducted in accordance with the procedures set forth in Subpart KKK and EPA Method 21. Subpart KKK and Method 21 are complex documents and provide a significant number of options for following the procedures. Effective use of the procedures of Subpart KKK and Method 21 requires the permittee to assemble the selected options in a written comprehensive plan to be followed by operating personnel. The operating permit requires the comprehensive plan to be submitted in order to define which procedures will be conducted. Compliance determinations and certifications will be based on the plan.

The permittee must perform an initial count of the components within ninety (90) days of the issuance of the Operating Permit. The permittee is then required to maintain a running tally of the component count in order to perform the fugitive leak emissions estimate. Piping and equipment modifications at a plant are an on-going process. Sufficient time has lapsed since the Construction Permit component count was performed for modifications to have changed the component count. The count must be re-established in order to provide the correct base for the running tally. The permittee must perform a physical count of the number of process valves, relief valves, pump seals, compressor seals, flanges and connectors at least once each five (5) calendar years in order to calculate the emissions from fugitive leaks. A 50% or 5 tons per year or more increase in hazardous air pollutant emissions; or 5 tons or more of criteria pollutant emissions, whichever is less, will necessitate the need for submittal of a Revised APEN.

4. Compliance Status: The equipment at this site has been operating for an extended time. The information needed to incorporate construction permit requirements in the Operating Permit for the stabilizer have been provided. A current APEN reporting emissions is on file with the Division. Duke certified in the application that natural gas has been used exclusively as the fuel for this unit. As noted above, the Division accepts the signing of the COC order as evidence of compliance.

Condensate Tank Truck Loadout

- 1. Applicable Requirements: During the review of the draft of the operating permit the permittee reported the condensate tanks were exempt from the applicable requirements of 40 CFR Part 60 Subpart Kb Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984. The storage tanks are for storing condensate prior to off-site transfer by truck. The Division accepted the exemption claim after conducting a review.
- **2. Emission Factors:** The truck loadout emissions are estimated from the equation provided in AP-42, and adjusted for the NonMethane, NonEthane VOC content of the liquid loaded. This equation is also included in the permit to establish the various factors to be used in the calculation.
- **3. Monitoring Plan:** The emissions from the truck loadout will be based on the recordkeeping of the gallons of throughput for the tanks.

A Revised APEN is required if a significant increase of VOC or HAPs occur as defined in Colorado Regulation No. 3, Part A, Section II.C.2. compared to the APEN currently on file with the Division.

4. Compliance Status: The equipment at this site has been operating for an extended time. A current APEN reporting criteria emissions is on file with the Division. As noted earlier, the Division accepts the compliance signature of the responsible official as evidence of compliance.

Natural Gas Liquids Truck Loadout Rack

- **1. Applicable Requirements:** The applicable requirement were established by Construction Permit 97WE0363, Attachment A.
- **2. Emission Factors:** The truck loadout emissions are generated from the natural gas liquids remaining in the transfer hoses when the hoses are disconnected after loading the trucks, leaks at the hose joints, and the deliberate venting of the residual pressure in the truck tank. The truck tank retains a residual pressure of approximately 160 PSI after the liquids have been off-loaded. The pressure has to be removed before the tank can be re-loaded. The tank is vented to a vapor recovery unit while reducing the pressure from 160 to 8 PSI. The vapor recovery unit can not capture the last 8 PSI of pressure remaining in the tank. This residual pressure is vented directly to atmosphere. The permittee estimates that approximately 0.6 tons per year of VOC emissions result from the direct venting of the remaining tank pressure.

3. Monitoring Plan: The emissions from the truck loadout will be based on the recordkeeping of the gallons of throughput for the tanks. Periodically the hoses are to be checked for potential leaks.

A Revised APEN is required if a significant increase of VOC or HAPs occur as defined in Colorado Regulation No. 3, Part A, Section II.C.2. compared to the APEN currently on file with the Division.

4. Compliance Status: The equipment at this site has been operating for an extended time. A current APEN reporting criteria emissions is on file with the Division. As noted earlier, the Division accepts the compliance signature of the responsible official as evidence of compliance.

Hot Oil Heater Two Each

1. Applicable Requirements: Construction Permit 97WE0304 established the applicable requirements for these two (2) sources. The removal of the short term limits established by the Construction Permit makes these sources subject to the fuel burning equipment particulate emission standard of Regulation No. 1, Part III. A.1.b. For the larger heater the standard is set by the equation $0.5(22.3)^{-0.26}$ as 0.22 pounds per million Btu of heat input. The estimated maximum particulate emissions are 0.0137 pounds per million Btu of heat input. Thus the heater will always be in compliance with the Regulation No. 1 particulate standard. The same outcome applies to the smaller heater.

These sources are not subject to the requirements of the 40 CFR Part 60 New Source Performance Standards (NSPS) Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. The APENs report the units were placed in service in 1987, which is prior to the Subpart Dc applicability date of June 9, 1989.

- 2. Emission Factors: The emissions were developed from the appropriate section of AP-42.
- **3. Monitoring Plan:** Monitoring will consist of tracking the amount of fuel combusted by the heater.

A Revised APEN is required if a significant increase of VOC or HAPs occur as defined in Colorado Regulation No. 3, Part A, Section II.C.2. compared to the APEN currently on file with the Division.

4. Compliance Status: The equipment at this site has been operating for an extended time. A current APEN reporting criteria emissions is on file with the Division. As noted previously, the Division accepts the compliance signature of the responsible official as evidence of compliance.

Insignificant Activities

The permittee needs to periodically review the insignificant activities to determine if they are still insignificant and in compliance with all applicable requirements. A record of review, the compliance determination, and any additions, deletions or changes to the insignificant source inventory should be maintained. The record will support the annual compliance certification for the insignificant sources. The inventory of insignificant sources provided in the permit application is included in Appendix A of the operating permit as a starting reference.

The Division's has some previous experience with purging/venting procedures during the startup and shutdown of compressor engines similar in size to the ones in this permit. The Division has generally found the engine dimensions and the presumption of a 20% VOC content in the gas stream results in the VOC emissions being less than two (2) tons per year. Since this estimated value is below the APEN reporting threshold established in Colorado Regulation 3 the Division concludes that these emissions are insignificant. The permittee might consider keeping records to demonstrate the maintenance and startup blowdown procedures do not require more than 30 minutes.

The Title V application noted that the three (3) condensate storage tanks needed construction permits because they were subject to the provisions of the New Source Performance Standards (NSPS), Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commence after July 23, 1984. The tanks were subject to the provisions because of the liquid stored, the tanks sizes, and the installation date. Subsequent to the application submittal, Duke Energy determined the tanks were not subject to the Kb provision, thus APEN exempt and should be considered to be insignificant sources.

The exemptions from Subpart Kb includes §60.110b(d)(4) which allows exemption from Kb under the following definition "Vessels with a design capacity less than or equal to 1,589,874 m³ used for petroleum or condensate stored, processed, or treated prior to custody transfer." Further, NSPS Subpart Ka §60.111b(c) states "Custody transfer means the transfer of produced petroleum and/or condensate, after processing and/or treatment in the producing operations, from storage vessels or automatic transfer facilities to pipelines or any other forms of transportation."

Duke's position is that the condensate is produced on-site by separation (processing) from the pipeline gas. The condensate collected is stored in the tanks prior to the custody transfer to the trucking company moving the condensate off-site. Therefore, the tanks store the condensate prior to custody transfer. The Division accepts the Duke position. The Title V permit includes the condensate tanks as insignificant sources.

Alternative Operating Scenario

Engine Replacement

The permittee requested that temporary replacement of engines during times of engine overhaul be considered an Alternative Operating Scenario. A temporary engine would operate for less than 3 months in the same service while an existing engine was being repaired or overhauled. The Division acceptance of the operation of the temporary engine is contingent on emissions testing of the engine to demonstrate the emissions are equal to or less than those from the engine replaced. Testing must be conducted under representative conditions for the engine being replaced. The permittee must be willing to accept a determination of non-compliance should the emissions testing determine the emissions from the engine in question exceed those defined in the Operating Permit. Non-compliance will be considered from the day the temporary engine started operation.

Hazardous Air Pollutants

The applicable requirement is for the reporting of estimated emissions above the appropriate bin thresholds established in Appendix D of Regulation No. 3. Hazardous air pollutant emissions for each source are estimated from manufacturer's information, AP-42 and GRI technical reports. A Revised APEN must be submitted when there is an increase in hazardous air pollutants of 50 percent (%) or five (5) tons per year, whichever is less, above the level of the last APEN submitted. The Division accepts this source was in compliance at the time the Title V application was submitted.

Permit Shield

The intent of the permit shield is to provide limited protection to the plant in the event of an error in the evaluation of whether a regulation, or portion of a regulation applies. The plant identifies the issue and presents its position. The Division reviews the position. If the Division and the plant mutually agree on the position, the issue is recorded in the permit. If, at a later date, it is determined that an error was made in the mutual decision, the plant is protected from enforcement action until the permit can be reopened and the correct requirements and a compliance schedule inserted.

In this application, an extensive list of non-applicable sections of the Federal and State regulations are identified for the sources, and the request for the shield justified.

Miscellaneous

Tech Review Summary - Greeley Gas Processing Plant

From time to time published emission factors are changed based on new or improved data. A logical concern is what happens if the use of the new emission factor in a calculation results in a source being out of compliance with a permit limit. For this operating permit, the emission factors or emission factor equations included in the permit are considered to be fixed until changed by the permit. Obviously, factors dependent on the fuel sulfur content or heat content can not be fixed and will vary with the test results. The formula for determining the emission factors is, however, fixed. It is the responsibility of the permittee to be aware of changes in the factors, and to notify the Division in writing of impacts on the permit requirements when there is a change in factors. Upon notification, the Division will work with the permittee to address the situation.

Short Term Limits

As noted at the start of this review document, new procedures resulted in the removal of short term emission and production/throughput limits from Construction Permits. The table below documents existing short term Construction Permit limits that were not incorporated in the Operating Permit.

Construction Permit	Emission Point	NOx, lb/hr	CO, lb/hr	VOC, lb/hr	Fuel Use or Process rate
97WE0363	P122; P123; P124; P125; P 126; P128; P129 - 1100 HP Engine	6.1	6.1	1.3	8,984 scf/hr
	P120- 450 HP Engine	2.5	2.5	0.5	3,787 scf/hr
	P121- 125 HP Engine	0.7	0.7	0.2	925 scf/hr
	P127- 896 HP Engine	4.0	6.0	1.0	7,329 scf/hr
	P138 - Condensate Loadout			62.0 lb/day	14,000 gal/yr
	P131 - 22.3 MMBtu/hr Heater	3.2	0.8		21,442 scf/hr
	P132 - 15.0 MMBtu/hr Heater	2.1	0.6		14,424 scf/hr
	P130 - EG Hydration Inhibition			1.1	0.833 scf/hr and 180 gph circulation rate
	P136 - TEG Glycol Regenerator			5.5	125,000 scf/hr and 18.0 gph circulation rate
	P133 - Fugitive from Fractionator			2.1	
	P137 - Plant Fugitives			4.3	
	P135 - NGL Loadout			110 lb/day	
	Total Plant Emissions	54.6	52.7	28.8	Engines - 75,000 scf/hr Heaters - 23,265 scf/hr